WASHINGTON STATE DEPARTMENT OF ECOLOGY

January 1997

AirLines

Are You Seeing Things?

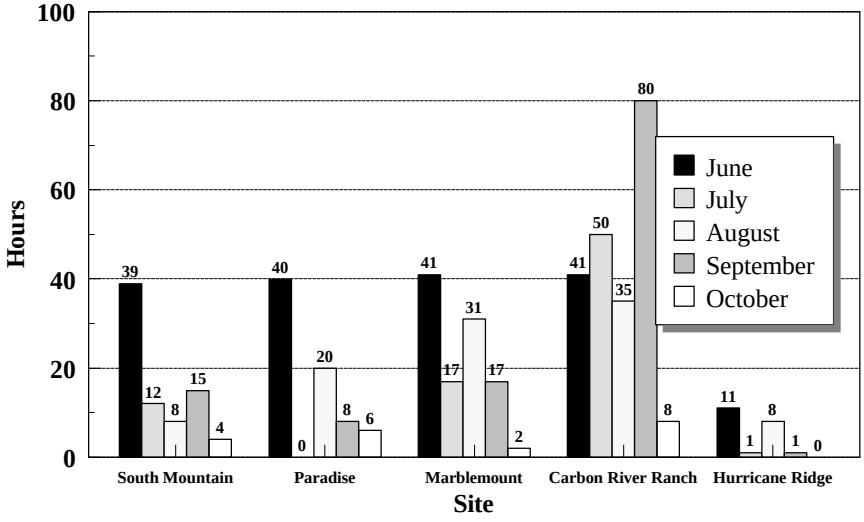
We can't always tell whether or not our air is clean just by the way it looks. However, one easy way to judge air quality is to look at how clearly scenic views or landmarks can be seen. For many people, the first thing brought to mind by the mention of Washington State is a picture of snow-capped Mt. Rainier. Western Washington residents have grown accustomed to seeing the mountain in the background while commuting to work and going about their day- to-day activities. You may have noticed, however, that it sometimes isn't easy to see this famous landmark. In fact, it can be almost invisible at times, either partly or completely obscured by an ugly brownish haze.

What's that haze?

The clarity of the air, or visibility, is affected by natural and human-caused materials in the air such as fine particles of soot or dust, and sulfates and nitrates (formed by the pollutants sulfur dioxide and nitrogen dioxide). Distant objects can appear veiled by a haze that reduces both color and brightness. The human-caused materials that cause this haze come from motor vehicles, large industries such as pulp mills and oil refineries, and activities such as outdoor burning. And poor visibility is just one of the problems associated with regional haze. The same fine particles of air pollution that cloud our views can also damage our health. Research has shown that fine particulate matter can damage our ability to breathe and cause serious lung diseases.

Gorge to how clearly Mt. Rainier can be seen from Seattle or Tacoma. Ecology began to monitor for visibility at two sites in 1981, and started adding more sites in 1984. Ecology currently monitors for visibility at Paradise and Carbon River Ranch at Mt. Rainier, Marblemount in the North Cascades, and Hurricane Ridge and South Mountain in the Olympic Mountains. The National Park Service and U.S. Forest Service also monitor for visibility at Mt. Rainier National Park, Snoqualmie Pass and the Columbia River

Hours of Visibility Impairment
1995 (Adjusted for missing data)

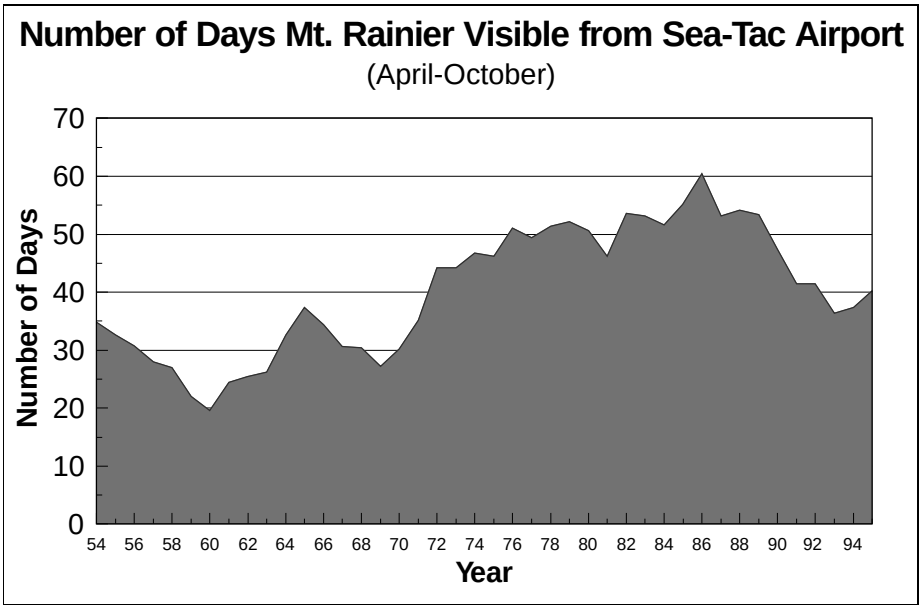


How bad is the problem?

In Washington, concerns about visibility range from the clarity of the view in the Columbia River

Gorge National Scenic Area. The graph on page 1 shows the number of hours during June through October 1995 that visibility was affected at each of the areas where Ecology monitors for visibility. On a fair weather day, visibility is considered to be very poor when a person can see no more than 50 miles into the distance due to the amount of particles in the air.

The graph (below) shows the number of days Mt. Rainier was visible from SeaTac Airport between April and October from 1954 to 1995. Visibility is monitored at the airport by visual observation. This is done as part of routine weather observations made by the National Weather Service. As you can see, visibility in this area became somewhat better in the 1970s, probably due to controls on industrial air pollution that began to take effect at that time. In addition to air pollution, weather affects visibility. Each point on this graph represents data averaged over five years to take weather conditions into account. Mt. Rainier's visibility from this site was at a peak in 1986, and has decreased slightly since then.



Protecting our state's scenic views

In many of our state's national park and wilderness areas, protecting visibility has high priority. The federal Clean Air Act has created "Class I" areas. These are areas in which there are restrictions on use of land and resources to protect visibility and prevent damage to plants, soil and other resources. In Washington, there are eight Class I areas:

- Mt. Rainier National Park
- Olympic National Park
- North Cascades National Park
- Alpine Lakes Wilderness
- Goat Rocks Wilderness
- Mount Adams Wilderness
- Glacier Peak Wilderness
- Pasayten Wilderness

The state is required to submit a plan to the federal Environmental Protection Agency (EPA) to show reasonable progress is being made to protect and improve visibility in these areas. The Department of Ecology submitted a plan in 1985, and EPA approved it in May 1987. Ecology will review Washington's visibility plan by April 1, 1997 to determine if it is working to protect visibility. If Ecology decides the plan needs to be changed in order to help make reasonable progress in protecting visibility, control measures may need to be developed to reduce the amount of haze in the air. These controls could affect power plants, industrial sources, motor vehicle owners, the agricultural industry and outdoor burning.

Little monitoring for visibility has been done in urban areas of our state. However, local air pollution control agencies and the Department of Ecology have begun studies of visual air quality in urban areas. The agencies have put in place camera systems that photograph important views from Bellingham, Seattle and Olympia. Additional equipment will analyze visual air quality. These studies are the first step in determining ways to restore clear views in urban areas.

If you are interested in being on a mailing list for visibility issues, please contact Tami Dahlgren at the Department of Ecology's Air Quality Program, (360) 407-6830; or P.O. Box 47600, Olympia, WA 98504-7600.

Reducing air quality impacts from the Centralia Power Plant

Power plant owners and representatives of various state, federal and local natural resource and environmental agencies recently agreed on a proposal for a dramatically lower emissions standard for the Centralia Power Plant. The Centralia Power Plant is a coal-fired power plant located in Centralia, Washington. It is one

Lifestyles

The haze in the air that keeps you from seeing some of Washington's beautiful scenery usually gets blamed on industry -- but motor vehicles are a big culprit, and burning worsens the problem as well. In fact, most of the air pollution problems we have today are the result of things we do as individuals. Here are some ways to reduce your contribution to the problem of regional haze.

- Drive less. Even if you're carpooling or busing to work, remember it's the non-commute trips that make up the largest portion of car travel. When you hop into your car to run errands, plan ahead to consolidate as many trips as you can. For instance, do your banking, return your library books and fill your gas tank while you're out to get groceries. This can save you both time and gas, as well as reducing air pollution by reducing the number of trips you make.

- Avoid burning outdoors. If you're wondering what to do with your yard debris other than burning it, call Ecology's tollfree recycling information line, 1-800-RECYCLE.

- If you heat with a wood stove, think about switching to a cleaner source of heat such as gas, electric or oil heat. If you choose to heat with wood and you have an older stove, you might be amazed at how much more cleanly and efficiently the newer certified stoves burn. In any case, use your wood stove or fireplace properly. This means burning only dry, seasoned wood -- absolutely nothing else! (Paper is okay to burn when starting your fire.) Burn small, hot fires and don't damper down too much.

- Keep an eye on the weather conditions. If everyone stopped burning when the air is very still and stagnant, we'd all breathe a lot easier -- and see a lot more clearly, too!

of the largest sources of sulfur dioxide -- the single largest contributor to impaired visibility -- in the western United States.

The group consisted of representatives of the U.S. Forest Service, the National Park Service, The U.S. Environmental Protection Agency, The Washington State Department of Ecology, the Southwest Air Pollution Control Authority and the Puget Sound Air Pollution Control Agency. They began meeting in January 1996 following announcement by the Southwest Regional Air Pollution Control Authority of a plan to lower the plant's emissions by about 50 percent. The National Park Service, which is responsible for protecting visibility at Mt. Rainier National Park, and others said the reductions were not enough.

The group's voluntarily negotiated plan was announced to the public in September. It will result in a 90 percent reduction in the amount of sulfur dioxide the plant emits by using wet scrubbers to reduce the sulfur dioxide that comes from two boilers. In addition to benefitting public health, these reductions in sulfur dioxide are expected to help reduce the number of days that visibility in the region is impaired from the current 35 days a year to two days per year in 2007. The plant will be able to continue supplying power and keep employees at its nearby coal mine on the job.

Will reducing emissions at the Centralia plant alone eliminate Mt. Rainier's haze problems? No. The plant causes about 16 percent of the haze that clouds our view of the mountain, according to a National Park Service analysis. Most of the rest comes from sulfates, nitrates and particulate matter produced in the Puget Sound urban area. The causes include motor vehicles, large industries, and activities such as outdoor burning -- the same sources Ecology is evaluating in its review of the state visibility plan (described on page 2). Ultimately, each of us will have a role in restoring and preserving our view of Washington's spectacular scenery. (Please see "Lifestyles," left.)

For more information about the Centralia Power Plant, contact Ann Butler, Department of Ecology Air Quality Program, (360) 407-6334.

Ecology provides information on water quality issues

Last year, "Air Lines" surveyed its readership on how to provide information people want and need in the best possible way. Many of you mentioned you would like more information on water quality issues. Although "Air Lines" is dedicated to providing information about air quality, a new newsletter exploring Washington's waters and shorelands is now available from Ecology.

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The quarterly newsletter, titled "Confluence," is published by Ecology's Water Division. It discusses how the quality of our water is protected and how its use is allocated, as well as providing information on how our shorelands, floodplains and wetlands are managed.
It is available for reading on the internet at **http://www.wa.gov/ecology/water.html**, or if you prefer to receive a copy of "Confluence" in the mail and/or to have your name placed on the mailing list for this newsletter, contact Tim Gates at (360) 407-7256 or email: tgat461@ecy.wa.gov.

Update

Ecology World Wide Web Page: Technical assistance information is now available on the Department of Ecology's World Wide Web Home Page. Those with access to the World Wide Web can access these resources via: **http://www.wa.gov/ecology/ta.html** You will find resources for technical assistance on air quality control, hazardous waste, underground storage tanks and much more. In addition, the Air Quality Program has a home page located at **http://www.wa.gov.ecology/air/airhome.html**. Contact: Judy Beitel, (360) 407-6878.

Technical assistance to dry cleaners: Ecology has developed a publication to assist dry cleaners in complying with state and federal regulations. The "Dry Cleaner Reference Manual," publication #96-200, is available in both English and Korean from Ecology's Publications Office, (360) 407-7472.

Air Lines is published quarterly and offers updated information on the Clean Air Washington Act and other Air Quality Program activities. *Air Lines* welcomes your comments. Questions and contributions should be directed to:

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